

### **REMARKS**

After entry of this amendment, claims 1-9 and 14-26 are pending, of which claims 14-24 are withdrawn. New claims 25 and 26 have been added and find support *inter alia* in the original claims and in the specification at page 23, lines 6-10. Claims 10-13 have been cancelled without prejudice or disclaimer. The claims have been amended without prejudice or disclaimer and find support *inter alia* in the original claims. Claim 1 finds further support in the specification at page 23, lines 6-9. Withdrawn claims 14 and 17 have been amended without prejudice or disclaimer and find support *inter alia* in the original claims and in the specification at page 23, lines 6-9. No new matter has been added.

### **Election/Restriction**

The Examiner made the restriction requirement final for lack of unity based on the finding that there is no special technical feature linking the claims. Applicants maintain their traverse for the reasons already of record and for the following additional remark.

As amended, claims 1 and 14 both recite a nucleic acid sequence encoding an  $\omega$ -3-desaturase that is capable of desaturating C20- or C22-fatty acids and claim 17 recites the same  $\omega$ -3-desaturase activity. Thus, the technical feature linking the claims of Groups I (claims 1-9), V (claims 14-16 and 18-24) and VI (claim 17) is the substrate specificity of the recited  $\omega$ -3-desaturase, i.e. desaturating C20- or C22-fatty acids. Applicants respectfully submit that the aforementioned technical feature makes a contribution over the art because the cited reference, U.S. Patent No. 6,549,018 by Knutson, does not teach an  $\omega$ -3-desaturase that is capable of desaturating C20- or C22-fatty acids as it will be discussed in more detail below. Because this application is a national stage filing pursuant to 35 U.S.C. § 371, unity of invention under PCT Rule 13.1 and 13.2 is the applicable standard. For these reason, Applicants respectfully request reconsideration of the restriction requirement, at least as to the claims of Groups I, V and VI, based on the correct standard of unity of invention.

### **Claim Objection**

Claim 6 is objected to as being unclear. Claim 6 has been amended without prejudice or disclaimer by adopting the Examiner's suggestion. It is believed that the objection is rendered

moot in light of the present amendment. Reconsideration and withdrawal of the objection is respectfully requested.

### **Specification**

In the specification at pages 1 and 6, appropriate section headings have been added as suggested by the Examiner. Additionally, a section entitled "BRIEF DESCRIPTION OF THE DRAWINGS" has been inserted at page 6 to accommodate the figure legends found on top of each drawing. Support is found *inter alia* in the drawings containing Figures 1-9. No new matter has been added.

### **Double Patenting**

Claims 1-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as unpatentable over claim 3 of co-pending U.S. Application Serial No. 10/566,944. Applicants disagree. However, to expedite prosecution, because this is a provisional rejection, Applicants will file an appropriate terminal disclaimer if the rejection stands when the claims are otherwise found allowable.

### **Claim Rejection – 35 U.S.C. § 102**

Claims 1-9 are rejected as anticipated under 35 U.S.C. § 102(b) by Knutson (U.S. Patent No. 6,549,018, hereinafter "Knutson"). Applicants respectfully disagree. However, to expedite prosecution, the claims have been amended without prejudice or disclaimer to recite the  $\omega$ -3-desaturase with more specificity. Applicants respectfully submit that the claims as amended overcome the present rejection for the following reasons.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegall Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631 (Fed. Cir. 1987). "[U]nless a reference discloses within the four corners of the document not only all the limitations claimed but also all of the limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102." *Net MoneyIN Inc. v. VeriSign Inc.*, 545 F.3d 1359 (Fed. Cir. 2008).

Knutson teaches a method of making polyunsaturated fatty acids in a plant by transforming a Brassica plant with an  $\omega$ -3-desaturase coding sequence, optionally further

combining with other fatty acid biosynthesis genes. As the Examiner pointed out, the  $\omega$ -3-desaturase taught in Knutzon also named as  $\Delta$ -15-desaturase. This particular  $\omega$ -3-desaturase /  $\Delta$ -15-desaturase converts linoleic acid (LA, 18:2) to  $\alpha$ -linolenic acid (ALA, 18:3). See Col. 4, lines 49-52, and Figure 1. Accordingly, the  $\omega$ -3-desaturase /  $\Delta$ -15-desaturase taught in Knutzon has substrate specificity only to C18-fatty acids. This is in consistent with the discussion in the present application at page 5, lines 22-24, where it states that all the known plant and cyanobacterial  $\omega$ -3-desaturases desaturate C18-fatty acids with LA as the substrate, but cannot desaturate C20- or C22-fatty acids.

As amended, the claimed process requires introducing into an organism at least one nucleic acid sequence encoding an  $\omega$ -3-desaturase that is capable of desaturating C20- or C22-fatty acids. As demonstrated in Example 7 at page 66-68 and Figure 8, the exemplified  $\omega$ -3-desaturase according to the present application is capable of desaturating C20- and C22-fatty acids in addition to C18-fatty acids, which distinguishes the  $\omega$ -3-desaturases of the present application over the  $\omega$ -3-desaturases known in the art.

Because the  $\omega$ -3-desaturase /  $\Delta$ -15-desaturase taught in Knutzon has no substrate specificity to C20- or C22-fatty acids, such an  $\omega$ -3-desaturase /  $\Delta$ -15-desaturase would not be capable of desaturating C20- or C22-fatty acids. Since Knutzon does not teach every limitation of the claims, Knutzon does not anticipate the claimed process as amended. *See Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) (“[T]o hold that a prior art reference anticipates a claim, the Board must expressly find that every limitation in the claim was identically shown in the single reference.”). Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

### **CONCLUSION**

In view of the above remarks and further in view of the above amendments, Applicants respectfully request withdrawal of the rejections and allowance of the claims. If any outstanding issues remain, the Examiner is invited to telephone the undersigned at the number given below.

Applicants reserve all rights to pursue the non-elected claims and subject matter in one or more divisional applications, if necessary.

This response is filed within the three-month period for response from the mailing of the Office Communication. No fee is believed due. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13987-00019-US from which the undersigned is authorized to draw.

Respectfully submitted,

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